

Date: Thu, 10 Feb 94 04:30:39 PST  
From: Ham-Equip Mailing List and Newsgroup <ham-equip@ucsd.edu>  
Errors-To: Ham-Equip-Errors@UCSD.Edu  
Reply-To: Ham-Equip@UCSD.Edu  
Precedence: Bulk  
Subject: Ham-Equip Digest V94 #27  
To: Ham-Equip

Ham-Equip Digest                      Thu, 10 Feb 94                      Volume 94 : Issue    27

Today's Topics:

386DX/25 PC For Sale (Great for Packet!)  
    Ear Mikes  
    Help!! need info standard C158A  
        Intermodulation  
    Kenwood TS-140 "Crummy" Switches  
    TS140S + ARRL Powersupply...  
    Vertical Antennas (2 msgs)

Send Replies or notes for publication to: <Ham-Equip@UCSD.Edu>

Send subscription requests to: <Ham-Equip-REQUEST@UCSD.Edu>

Problems you can't solve otherwise to brian@ucsd.edu.

Archives of past issues of the Ham-Equip Digest are available  
(by FTP only) from UCSD.Edu in directory "mailarchives/ham-equip".

We trust that readers are intelligent enough to realize that all text  
herein consists of personal comments and does not represent the official  
policies or positions of any party. Your mileage may vary. So there.

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Date: 9 Feb 1994 00:40:13 -0500  
From: agate!spool.mu.edu!torn!nott!gandalf.ca!gandalf.ca!not-for-  
mail@network.ucsd.edu  
Subject: 386DX/25 PC For Sale (Great for Packet!)  
To: ham-equip@ucsd.edu

System includes 8MB RAM, 80MB SCSI hard drive, 5.25 1.2 MB Floppy and  
an ATI SVGA video controller (no monitor). Asking \$500. Email  
bob@gandalf.ca if interested.

Thanks,

Bob n2oiq

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Date: Tue, 8 Feb 1994 15:59:07 GMT  
From: ucsnews!sol.ctr.columbia.edu!howland.reston.ans.net!news.intercon.com!  
psinntp!psinntp!psinntp!relay1!rsvl\_ns!ernie!rsvl.unisys.com!  
wilpwr@network.ucsd.edu  
Subject: Ear Mikes  
To: ham-equip@ucsd.edu

The U. of MN ARC provides communication for the EMTs at Gopher Basketball games, and (surprise!) the games can get quite noisy. I currently use an earplug with a speaker mike, and I am looking for a better solution. When I am standing near the band, I can barely hear through the earpiece, and cannot hear myself as I speak through the mike.

Would an ear mike help? Any experiences??

Bill Powers WY0Q <wilpwr@rsvl.unisys.com>  
<powe0040@gold.tc.umn.edu>  
UNISYS Corp.  
MS 4033 Phone: [612] 635-5267  
P.O. Box 64942 FAX: [612] 635-7523  
St. Paul, MN 55164-0942

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Date: 9 Feb 94 09:56:44 CST  
From: library.ucla.edu!news.ucdavis.edu!agate!howland.reston.ans.net!  
vixen.cso.uiuc.edu!moe.ksu.ksu.edu!engr.uark.edu!news.ualr.edu!athena.ualr.edu!  
pmstuckey@network.ucsd.edu  
Subject: Help!! need info standard C158A  
To: ham-equip@ucsd.edu

Hi, I am in need of some info for the new Standard C158A 2 meter handheld radio that is advertised in the Feb 94 QST on page 19... What I need is the specific part number for some of the outer parts, knobs etc.. if anyone has the radio and the book with the part numbers, please let me know.. I REALLY need this info.. Thanks..

\*\*\*\*\*  
\* - - Peter M Stuckey - - \*  
\* 0 0 University of Arkansas at Little Rock  
\* 0 0 \*  
\* ) Internet "PMSTUCKEY@UALR.edu" ( \*  
\* \\_\_\_/ Amateur Radio Call Sign \\_\_\_/ \*  
\*\*\*KEEP\*\* KB5WCE - 146.55 MHz \*\*SMILIN'\*\*  
\*\*\*\*\*

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Date: 5 Feb 94 09:59:01 GMT  
From: illuminati.io.com!nobody@uunet.uu.net  
Subject: Intermodulation  
To: ham-equip@ucsd.edu

A while back, I asked on a local board about intermodulation. I was given an explanation, but as much as I hate to admit it, I don't grasp it.

I understand that if you have a radio that does more than it should, such as out-of-band scanning, or dual-band HT's, you get "intermod". Unfortunately, I don't know WHAT intermod signals sound like, what they do, how they do it, and why I'm too moronic to grasp the concept.

Here's the situation that prompted the debate with myself:

I have a scanner which picks up the local mall security on 464.575 I also hear the WD8EEQ repeater on this frequency. The guy who owns it hasn't been around for a few weeks, so I can't ask him why I'm hearing his repeater out of the 70cm band, and why it's so \*clear\*. I don't mean some static - this is as clear as day. I'm also hearing Mall Security on that frequency. They do not seem to be interfering with each other.

Last night, when I went to the mall, I saw a dipole antenna above the security office. Of course, until I got into ham radio, I never noticed it 'fore. But it's definitely a dipole. Lord knows it could be any sort of dipole, but it looks all-too-hammish.

So, now I've got an explanation that "intermod is causing this". I'm also at a loss to figure out security/ham on the same frequency. And, btw, I'm listening on a scanner, not an HT. So, I do not believe "intermod" is causing this.

--

.....  
Matt Rupert                      Bodyguards - Personal Liason      Taurus Executive Protection  
2984 Pheasant Run Drive apt D      Jackson MI 49202      (517) 782-1438 24hrs a day  
   "This is UNIX...I know this!"      Jurassic Park

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Date: Tue, 8 Feb 1994 17:48:09 GMT  
From: spool.mu.edu!howland.reston.ans.net!vixen.cso.uiuc.edu!cs.uiuc.edu!  
news1.oakland.edu!rcsuna.gmr.com!kocrsv01!c2xjcb@uunet.uu.net  
Subject: Kenwood TS-140 "Crummy" Switches  
To: ham-equip@ucsd.edu

Please respond directly via E-mail . . . I don't regularly subscribe to this newsgroup . . .thanx

I have a Kenwood TS-140 that's about 3 years old, and I've noticed that several of the "buttons" (and the small rotary knob used for 10KHz steps and memory channel selection) don't seem to work very well anymore. The rotary knob was the 1st to go; rotating the knob at a reasonably brisk pace wouldn't hardly "move" your frequency at all (in fact, sometimes you'd find yourself a few 10's of KHz in the OTHER direction from what you'd turned it). Apparantly there is some sort of "switch bounce" problem. Kenwood DID leave a small hole behind the knob for spraying-in "Tuner Cleaner", which works for a while, but the problem comes back after a few weeks.

Lately I've noticed that several of the push-buttons (the ones to the left of the main tuning knob, used for LSB/USB CW/CWN AM/FM and for the VFO->M selection, no longer work well. You have to press them off-center to activate, and the VFO->M button is nearly DEAD.

I am not a MAJORLY active ham, in fact, I'm embarrassed at how little I use my hard earned license (always seems to be other things I need or want to do around the house) . . . so I don't believe that the problem stems from over-use (i.e. wearout). Can my "lack of use" be a problem (i.e. oxidized contacts)? The rig IS in my basement, but, it is heated and dehumidified, so moisture doesn't seem likely.

Anyone have any similar experiences? Any good remedies?

Thanx (in advance).

--

James C. Bach	Ph: (317)-451-0455	The views & opinions expressed
Advanced Project Engr.	GM-NET: 8-322-0455	herein are mine alone, and are
Powertrain Strategy Grp	Amateur Radio: WY9F	NOT endorsed, sponsored, nor
Delco Electronics Corp.	Just say NO to UNIX!	encouraged by DE or GM.

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Date: Tue, 8 Feb 1994 16:43:32 GMT  
From: kithrup.com!majipoor.cygnus.com!sgiblab!swrinde!cs.utexas.edu!  
howland.reston.ans.net!agate!headwall.Stanford.EDU!Csl!kawai@uunet.uu.net  
Subject: TS140S + ARRL Powersupply...  
To: ham-equip@ucsd.edu

Demetre Koumanakos (demetre@phaethon.intranet.gr) asks:

| While having a TS140S hooked on the power supply, and while the

| radio itself was off, when the supply was turned off the voltage  
| would jump to full voltage (30V+) for a second or two before the  
| capacitors would discharge...

[Very tentative suggestion:] Could it be that your rig is not  
well-grounded? Did you see the voltage spike after you had been using  
your rig for a while, and then you turned it off?

	SRI International		work:(415)859-2231	
	Speech Technology and Research		fax:(415)859-5984	
Goh Kawai	Menlo Park, CA 94025-3493 USA		home:(415)323-7214	
	internet: kawai@speech.sri.com		radio: N6UOK and 7L1FQE	

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Date: Tue, 8 Feb 1994 15:09:38 GMT  
From: ucsnews!sol.ctr.columbia.edu!emory!wa4mei.ping.com!ke4zv!  
gary@network.ucsd.edu  
Subject: Vertical Antennas  
To: ham-equip@ucsd.edu

In article <CKvGDJ.GFv@srigenprp.sr.hp.com> alanb@sr.hp.com (Alan Bloom) writes:  
>If you compare a vertical over an infinite ground plane to a dipole  
>(or any other antenna) in free space, you are comparing apples to oranges.

True.

>When thinking about antenna gain, it helps immensely to remember the  
>principle of conservation of energy. Nearly all full-sized antennas are  
>essentially 100% efficient. That means that a dipole, a vertical, a  
>rhombic, a Yagi beam, etc. all radiate 1 watt for every watt applied  
>through the feedline. To obtain gain, the antenna directs more of its  
>signal in one direction and less in another.

I'd argue that a quarterwave vertical over real lossy ground doesn't  
fit the idea of 100% efficiency very well. It expends quite a bit of  
it's energy warming the earthworms in the lossy soil making up it's  
current mirror. (IE half the "full size" antenna in this case is really  
a current reflection in the lossy ground.)

>Any antenna over an infinite ground plane has a 3 dB (2x power) advantage  
^^^ emphasis added  
>over an antenna in free space. That's because it only has 1/2 of all  
>possible directions in which to send its signal.

Over an infinite \*perfectly reflective\* ground plane. Over lossy ground,  
that 3 db is reduced by ground losses, though some gain remains. The  
more you can improve the ground plane, the closer to the ideal 3 db

you'll approach.

>Consider a vertical dipole in free space. You could insert a horizontal  
>infinite ground plane at the feedpoint without changing the radiation  
>pattern. Now you have two verticals, one pointing up, one pointing down.  
>Each vertical radiates half the power of the original dipole.

True because each has half the current that flows in the entire dipole.

>Note  
>that the upper vertical (over a groundplane) can generate the same  
>field strength as the dipole (in free space), but with only 1/2 the power.

No, I disagree with the way you're saying this. The upper vertical in this thought experiment has half the current of the dipole and so generates half the field. The ground mirror is supplying a 3 db reflection gain that makes up for the lower field produced by the current in the upper vertical.

>So a 1/4-wave vertical over an infinite ground plane has 3 dB power "gain"  
>over a dipole in free space.

True only *if* it has the same current flowing in it as the dipole. IE the current flowing in the quarterwave vertical is 2 times the current flowing in *half* of the free space dipole. (True for constant power input to both antennas since the base impedance of the vertical is half that of the dipole.) That, with the phantom mirror current in the ground plane, has the same effect as would doubling the current fed into a dipole in free space, thus the 3 db gain.

I think we're trying to say the same thing, but looking at it from a slightly different perspective.

>Now consider a dipole suspended a half wavelength or more over an infinite  
>ground plane. In some directions, it will have 6 dB gain over a dipole  
>in free space, which gives 3 dB gain over the vertical. In other directions,  
>the field will be zero. If you averaged the radiated power over all  
>directions (half sphere), you would find it sums to the same power as the  
>1/4-wave vertical (also averaged over all directions.)

True, but gain in the main lobe (what we normally mean when we talk about gain) is 2X that of the vertical. And in the real world of lossy ground planes that make poor current mirrors, the horizontal dipole has a greater efficiency. A vertical halfwave, that doesn't need the current mirror, will also have greater efficiency than the quarterwave over real ground.

Gary

--

Gary Coffman KE4ZV | You make it, | gatech!wa4mei!ke4zv!gary

Destructive Testing Systems		we break it.		uunet!rsiatl!ke4zv!gary
534 Shannon Way		Guaranteed!		emory!kd4nc!ke4zv!gary
Lawrenceville, GA 30244				

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Date: Mon, 7 Feb 1994 20:46:31 GMT  
From: agate!howland.reston.ans.net!vixen.cso.uiuc.edu!sdd.hp.com!col.hp.com!  
srgenprp!alanb@network.ucsd.edu  
Subject: Vertical Antennas  
To: ham-equip@ucsd.edu

If you compare a vertical over an infinite ground plane to a dipole (or any other antenna) in free space, you are comparing apples to oranges.

When thinking about antenna gain, it helps immensely to remember the principle of conservation of energy. Nearly all full-sized antennas are essentially 100% efficient. That means that a dipole, a vertical, a rhombic, a Yagi beam, etc. all radiate 1 watt for every watt applied through the feedline. To obtain gain, the antenna directs more of its signal in one direction and less in another.

Any antenna over an infinite ground plane has a 3 dB (2x power) advantage over an antenna in free space. That's because it only has 1/2 of all possible directions in which to send its signal.

Consider a vertical dipole in free space. You could insert a horizontal infinite ground plane at the feedpoint without changing the radiation pattern. Now you have two verticals, one pointing up, one pointing down. Each vertical radiates half the power of the original dipole. Note that the upper vertical (over a groundplane) can generate the same field strength as the dipole (in free space), but with only 1/2 the power. So a 1/4-wave vertical over an infinite ground plane has 3 dB power "gain" over a dipole in free space.

Now consider a dipole suspended a half wavelength or more over an infinite ground plane. In some directions, it will have 6 dB gain over a dipole in free space, which gives 3 dB gain over the vertical. In other directions, the field will be zero. If you averaged the radiated power over all directions (half sphere), you would find it sums to the same power as the 1/4-wave vertical (also averaged over all directions.)

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Date: Fri, 4 Feb 1994 12:17:17 GMT  
From: munnari.oz.au!metro!news.cs.su.oz.au!harbinger.cc.monash.edu.au!

yeshua.marcam.com!nic.hookup.net!paladin.american.edu!zombie.ncsc.mil!admii!  
ovation!ramcad.pica.army.mil!mellis@network.  
To: ham-equip@ucsd.edu

References <ah301-260194121225@129.228.248.39>, <2i8rnf\$o5n@explorer.clark.net>,  
<CKM79r.45H@sunsrvr6.cci.com>m  
Reply-To : mellis@ramcad.pica.army.mil (Mark Ellis)  
Subject : Re: htx-202 or dj-162 ?

>>>I'd like to get comments and opinions from people in the net who  
>>>have actually used both.  
>>>currently, I am leaning towards the dj-162 because of its wide  
>>>receive.  
>>  
>>The HTX202 is a good radio. It comes with the CTCSS, DTMF squelch, and  
>>it can store telephone numbers. It has 14 memories, I think.  
>>  
>>                    Matt Roberts N3GZM  
>  
>I'll second the motion. The HTX-202 is also more sensitive on receive  
>than my ICOM-27H, of a late 70's or early 80's vintage. And the price  
>is right when Radio Shack runs one of their periodic "sales".  
>  
>73...Jim  
>N2VNO

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And my htx-202 is still working after I dropped it last nite. Of course,  
it was cushioned by the concrete floor it landed on :-). Or maybe :-(.  
  
I got mine on sale for \$200 last summer.

--- Mark Ellis n2wzb

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End of Ham-Equip Digest V94 #27  
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